Student Satisfaction in Online Learning during COVID 19 with special reference to Eastern University, Sri Lanka

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Abstract
The learning methods in higher education has been changed from time to time all over the world. This is a remarkable change which the higher education system in the world is compelled to adopt due to COVID 19. In this context, the teaching & learning method in Sri Lankan higher education system has been changed from traditional method to on line method. The main objective of this study to identify the factors affecting the student satisfaction in online learning method in Eastern University, Sri Lanka during the during the lasttwo years. Accordingly, an Online questionnaire was prepared and sent to around 400 students by email and whatsapp. The statistical population of this study includes all four years students including first, second, third and fourth years of Faculty of Commerce and Management, Eastern University, Sri Lanka. In total, 400 questionnaires were distributed, of which 329 questionnaires were returned and analyzed using univariateand bivariate analyses in SPSS 22.0.Univariate analysis is used to measure the mean, standard deviation of each dimension. It is a useful tool to measure the levels of a variable and Correlation analysis is used to analysis the relationships between variables.
The findings of the study revealed that levels of student's satisfaction in online learning are in moderate levels in selected students in the Faculty.Students highly satisfied with technology and less satisfaction with students outcomes compare with other satisfaction subscales. Nevertheless, students were highly satisfied with Instructor and moderately satisfied with other subscales such as setup of the class, interaction between students and their final outcomes.Study reveals a significant correlation between the overall satisfaction of students with Instructor, technology and outcomes. Therefore, this study will help the teachers and educators to think of a mechanism to improve the student's satisfaction and performance in online teaching & learning method.
Keywords –Students Satisfaction, Online Learning

I. Introduction

During the COVID-19 pandemic, online learning enabled schools and universities to keep their doors open for students during lockdown to decrease the spread of disease. Despite the fact that online learning is the only available solution during the COVID-19 pandemic, student satisfaction is a key to a good and effective learning experience.

Universities in Sri Lanka and a few other affected countries were forced to close in early February 2020 due to the spread of contamination. Due to the indefinite shutdown of schools and universities, both educational institutions and students are experimenting with alternatives to complete their assigned syllabus within the time frame set by the academic calendar. Educational institutions in affected areas are looking for quick measures to keep teaching going, but it's crucial to remember that the quality of learning is dependent on the level of digital access and efficiency. When it comes to student motivation, satisfaction, and interaction, the online learning environment is significantly different from the typical classroom setting (Bignoux&Sund, 2018). According to Adam et al. (2012), there was no significant difference in satisfaction between online learning and face-to-face classes, and they also supported the idea that if structured properly, online classes can be as effective as traditional classes. These facts clearly demonstrate that, when properly structured, online learning may be an ideal substitute for traditional classroom learning.

Satisfaction with online learning is based on three learning theories: social cognitive theory, interaction equivalency theorem, and social integration theory (Bandura, 2001; Miyazoe, 2010 &Tian, 2011). Communication, student participation in online discussions, flexibility, workload, technology supports, instructor pedagogical skills, and feedback are all aspects that go into determining student satisfaction in online learning (Ozturk, Karamete&Çetin, 2020).Also there are positive experiences from online learning such as availability of technological information, convenience of learning distance and online assessment methods while there are negative sides such as lack of technical support, insufficient feedback from instructors, poor online

platform design, and wearisome training methods (Cristina, Petru, &Petru, 2017).Student satisfaction is improved by involving students in informal extracurricular activities in addition to their academic program. Satisfaction has a relationship with student engagement and academic performance, according to a growing body of research (Meyer, 2014 &Croxton, 2014).

Eastern University in Sri Lanka (EUSL) which is having six faculties whereas Six faculties situated in Vantharumoolai except two in Kallady and Batticaloa Town which is around 20 km away from the main campus. Furthermore, the Eastern University of Sri Lanka is functioning in three locations: the main campus is in Vantharumoolai, the Trincomalee Campus in Trincomalee, and the Swami Vipulananda Institute of Aesthetic Studies (SVIAS) in Kalladi, all of which have library networks, ICT centers, and sports facilities. At present, Eastern University, Sri Lanka is moving towards its mission to become a Centre of Excellence for Higher Education and Research, is making a conscious effort to strengthen the University's functions at all levels. EUSL is offering both Undergraduate and Postgraduate programs, and the majority of the mode of study is face to face, except the use of Learning Management System(LMS) mainly for upload notes. Even though, the usage of LMS is varying from faculty to faculty due to Staff and Students acquaintance of the LMS. But, in a given recent COVID-19 pandemic, EUSL has implemented online education in all faculties, not only through ZOOM and LMS, but also through Google Classroom, Whatsapp, and YouTube, based on preference of staff and student and the availability of such facilties.

In this context, there is a need to find whether the new method of teaching and learning is productive and satisfy the students. Therefore, this study is intended to capture undergraduates' perspectives of online learning, with special reference to EUSL undergraduates, in order to fill any gaps in this concept that may need to be filled, so that the online education method can succeed wherever EUSL wants to continue and continue even in the future. Several studies in similar title have verified the existence of various variables that influence student satisfaction. The purpose of this study is to investigate the influence of student satisfaction subscales on student overall satisfaction in the context of online learning in Eastern University, Sri Lanka.

II.   Research Design/ Materials and Methods

A study was conducted at the Faculty of Commerce and Management (FCM), Eastern University of SriLanka(EUSL) between June and July 2021. Almost all the state universities in Sri Lanka including the EUSL conducted classes through online during the period due to COVID-19, using Zoom and Microsoft Teams for synchronous and asynchronous sessions.

The sample size was 320 students, and it was calculated using the finite population formula; the margin of error was set at 5%, and the confidence level was set at 95%. To measure students' satisfaction with online learning, we used pre-validated questionnaire. The questionnaire was organized into two parts – socio-demographic information and satisfaction with online learning – using different satisfaction scales. The students' satisfaction questionnaire was developed by Bolliger and Halupa in 2012 based on the Online Course Satisfaction Survey (OCSS). It consisted of 24 items categorized into the following subscales: instructor, technology, course setup, interaction, outcomes and overall satisfaction. The questionnaire used a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire showed evidence of validity, reliability and internal consistency of the instrument's subscales in assessing satisfaction with online learning, using Cronbach's alphas of 0.91. Expectant participants received questionnaires and a research information sheet through email and sharing to their batch whatsapp group. All participants gave their consent online, and they were given contact information in case they had any questions or needed to clarify anything. SPSS was used for statistical analysis. Descriptive statistics were used to analyze the responses to the satisfaction scales. An independent sample t-test was used find mean scores of the satisfaction subscale with gender. The significance level was set at a p-value of less than .05.

III.   Results/ Findings

Two hundred and eighteen responses (218) out of 320 were received from four years students of faculty of commerce and management, Eastern University, Sri Lanka. Majority of students from first year (34.0%) took participate actively with this research. A response rate comprised of 157 (72.1%) female and 61 (27.9%) male students (Table 1).Table 1 show most of the female participants actively took part in this research process which concludes the finding of Martin &Bolliger, 2018 who found that female students were more satisfied with online learning than male students.

Table I Demographic characteristics of participants

Characteristics	Criteria	Frequency%	
Year	First Year	74	34.0%
	Second Year	59	27.0%
	Third Year	37	17.0%
	Final Year	48	22.0%
Gender	Male	61	27.9%
	Female	157	72.1%

The subscales of student satisfaction revealed a mean score of less than 4 out of 5 in all subscales. As per the TableII, students highly satisfied with technology (M=3.78 ± 0.528) and less satisfaction with students outcomes (M=3.05 ± 0.699) compare with other satisfaction subscales. Nevertheless, students were highly satisfied with Instructor and moderately satisfied with other subscales such as setup of the class, interaction between students and their final outcomes.Almost students were highly satisfied with overall subscales and the flexibility afforded during online learning.

Challenges faced by students were difficult to apply practically what they learned from online course, performance destructions from their outcome and self-directed responsibilities assigned to them which all shown mean value less than 3.00 (Table II).

Table II Levels of Student Satisfaction

Variable	Indicators	M	SD	N
Instructor	There was clear communication of class assignments	4.19	.658	218
	Evaluation, test and feedback were given on time.	3.02	.601	218
	I felt a part of the class and belonged to the online session.	3.90	.820	218
	I am satisfied with faculty accessibility and availability.	3.01	.711	218
		3.53	**.697**	**218**
Technology	I am satisfied with online communication including email and announcements.	3.52	.567	218
	Blackboard LMS is user-friendly.	3.80	.465	218
	I am satisfied with the download duration of learning resources.	4.03	.554	218
		3.78	**.528**	**218**
Setup	I am satisfied with the number of online sessions.	3.18	.642	218
	Online courses offered flexible timing.	4.26	.760	218
	I am satisfied with the self-directed responsibilities assigned to me	3.00	.948	218
	I enjoyed working on projects during online learning	3.51	.913	218
		3.48	**.815**	**218**
Interaction	I am satisfied with the quality of interaction between me, the faculty and peers.	3.18	.859	218
	I am satisfied with collaborative activities during online learning	3.07	.913	218
	I can relate my level of understanding to other students'	3.13	.768	218
	I am comfortable with participating in online sessions	3.29	.862	218
		3.16	**.850**	**218**
Outcome	I am satisfied with the level of required effort in online course.	3.12	.611	329
	I am satisfied with my performance in online course.	3.00	.743	329
	I will be satisfied with my final grade.	3.18	.989	329
	I am able to apply what I learned in this online course	2.93	.455	329
		3.05	**.699**	**329**
Overall satisfaction	I will recommend this online learning experience to others	3.04	.991	329
	I am more satisfied with online learning compared to face-to-face sessions.	3.53	.988	329
	My satisfaction level encourages me to register in other available online	3.89	.752	329
		3.48	**.910**	**329**

(Developed for Research Purpose)

The correlation between the overall satisfaction and subscales among students reveals a significant correlation between the overall satisfaction of students with Instructor (r = 0.764, p = .000), technology (r = 0.711, p = .000), and outcomes (r = 0.741, p = .000) (Table III).

Table III Correlation between the overall satisfaction and satisfaction subscales among students

Satisfaction	1	2	3	4	5	6	7
Instructor							
Technology	0.70						
Setup	0.522	.501**					
Interaction	0.517	.668**	0.611				
Outcome	0.659	.631**	0.565	.596*			
Overall	0.764**	711**	0.504	535*	0.741**		
Total	0.819**	701**	0.748	.751*	0.829**	0.871**	

**Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

IV.   Discussion and Conclusion

When comparing the current study to previous research, earlier studies examined at the factors that influence student satisfaction in the traditional schooling framework. The current study, on the other side, was done during Sri Lanka's lockdown era in order to identify the key factors that influence students' satisfaction with online classes.To the best of our knowledge, lack of study has measured student satisfaction on online learning in the context of Sri Lanka. Students in the current study were satisfied with moderate level in the communication and flexibility provided by online learning by the faculty.Yang&Cornelius (2004) discovered when participants were asked to evaluate the overall quality of online education they received, their answers were moderate. Moderate quality of online education implies that they were not very satisfied with the education received, or they did not perceive that the online education they received as of high quality.Another cause of low satisfaction could be the sudden move to online delivery of the curriculum due to COVID19, which left limited time for preparation and was compounded by the pandemic's stressful working conditions (Saravanan, Mahmoud &Elshami 2020). Students had the most challenges in implementing their online class outcomes into practice, as well as in their performance and class setup.

The present study's findings indicated that technology is the most prominent factor that affects the student's satisfaction during online classes. Students' enthusiasm in accessing their online courses is increased by easy access to smart devices and the Internet. According to Butnaru, Nit, Anichiti, and Brinz (2021), students who own a computer or other high-quality equipment that allows them to attend online courses perceive these courses to be more effective.All internet service providers in Sri Lanka allowed free access to university web servers during COVID-19, which occurred from August 17, 2020, supporting online education and some could receive discounts on Internet access due to the enrollment of online class.

The instructor is the second most important factor determining students' satisfaction during online sessions, according to the current study.This requires a high level of quality from the instructor during the lectures. To deliver the course content effectively, he/she should first understand the psychology of the students. The student's satisfaction and performance are influenced by the instructor's ability to present the course content effectively.The third factor that affects the student's satisfaction is setup of the class. Numbers of session that instructor put in week influence on engagement of students with particular subject. Students prefer to conduct online classes with flexible time period where all are in their home. Most of the students need to depend on others for their device accessibility.

Fourth factor of this study which influences student satisfaction is Interaction between students.The interaction construct plays an important role in both face-to-face and online learning modalities (Kuo, Walker, Belland& Schroder, 2013). In fact, several studies have revealed that in most any learning environment, both the quantity and quality of student interactions are highly correlated with student satisfaction. However, researchers have found that demographic and cultural factors influence the creation of acceptable online interaction techniques (Gonzalez-Gomez, Guardiola, MartnRodrguez, &Montaro Alonso, 2012).Butnaru et al. (2021) found that there is positive impact between the capacity of the teaching staff to be more lenient and the perception of the effectiveness of online courses for the high school students group.

The last factor that affects the student's satisfaction is outcome.The scope and depth of the operationalization measure of "grade" or "score" to determine performance level may be inadequate (Paul and Jefferson, 2019). Grades in a class may not always reflect actual capability, especially if the weights have been shifted to favor group assignments and writing projects. Other performance indicators may be more appropriate

for assessing student achievement. A single exam with both multiple choice and essay questions in which students use their knowledge in a practical way could be a better operationalization indicator of student outcomes.

The current study shows that students' overall satisfaction correlated with Instructor, technology and outcomes. And the most reported area of dissatisfaction was related to outcomes of students and facing struggle to apply what they learned in practically. Even with the best-designed online course, many authors have reported that technical issues can lead to ineffective learning.The same authors also reported that technology-related factors might impact student satisfaction with online education, including the level of technical support they can rely on and the user-friendliness of the technological infrastructure of their courses (Wingo, Ivankova& Moss, 2017).

V.   Implications of the study

These findings of this study have a wide range of practical applications for educators, students, and researchers. The current study's findings may be useful for planning, designing, and delivering online learning activities, as well as increasing student satisfaction with online courses and, as a result, learning quality. It is essential to provide students with constructive and timely feedback on their performance in order to improve their satisfaction and engagement with online learning.According to a research, students expect not only timely feedback on assignments and exams, but also a high level of presentation and delivery of knowledge from their instructors. (Denis & Simon, 2019).Small group discussions and engaging gaming activities, according to students, boost student interaction and engagement. Online discussion also plays a significant role in online learning success. Discussion is an active learning process that encourages students to interact in content through discussion and reflections rather than passive listening. Active learning is facilitated by the use of interactive multimedia. It also promotes authentic learning, problem-solving abilities, and the creation of new information through reflection.

VI.   Limitations and future scope of the study

The data collected in this study was geographically limited in nature due to which it is difficult to consider other state and private university students in Sri Lanka. The study focuses exclusively on Sri Lankan students; however, if data is collected from a range of countries, it will be better to compare results and have a greater understanding of the student's perspective in online classes. Furthermore, the data was collected from only one sort of respondent, namely, students. As a result, the study's findings cannot be applied to other samples. Future research could include faculty and policymaker views in order to expand the scope of the findings. Because the current study is limited to theory classes, it can be used to assess students' satisfaction in practical classes. This study is limited to check the satisfaction of students, so in the future, the performance of students can be checked with similar kinds of conditions. This study highlighted common factors affecting student satisfaction with online learning in the new normal. The use of a self-assessment questionnaire is a limitation of this study. To get a more in-depth look at the components that affect satisfaction, more research is required. A full qualitative approach, which includes focus group discussions and interviews, could be beneficial.

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